

Application No. 09/211,715  
Reply to Office Action of November 20, 2002

May 7, 2003  
S&L File No. P26,835 USA

### REMARKS

Claims 2, 3, 7-11, 20-23 and 25 are pending in the application. Claims 2 and 3 have been cancelled herein without prejudice. Applicants reserve the right to pursue the subject matter of claims 2 and 3 in a continuing application that claims the same benefit of priority as the subject application.

Claims 8, 9, 10, 11, 20 and 25 have been amended. Support for the amendment to the specification and claims 8, 10, 11, and 20 can be found, for example, at page 11, lines 13-14. Support for the amendment to claim 9 can be found, for example, at page 12, line 29. Support for the amendment to claim 25 can be found, for example, in the claims as filed and in the specification at page 8, lines 20-23. Accordingly, these amendments do not raise an issue of new matter and entry thereof is respectfully requested. A marked up version of the amended claims is provided in Appendix A attached hereto.

Applicants have carefully reviewed the Office Action and respectfully traverse all grounds of objection and rejection to the application for the reasons that follow.

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Rejection Under 35 U.S.C. § 112, First Paragraph

The objection to the specification and rejection of claims 2 and 3 under 35 U.S.C. § 112, first paragraph, as allegedly lacking enablement is respectfully traversed.

The Office Action acknowledges that the specification is enabling for Y-I-R containing peptides or closely related analogues. However, the Office Action states that the specification does not provide enablement for a general formula recited in claims 2 and 3.

Applicants maintain that the specification provides sufficient guidance to enable claims 2 and 3. In addition, since claims 2 and 3 have been cancelled herein, the rejection of claims 2 and 3 under 35 U.S.C. § 112, first paragraph, has been rendered moot. Accordingly, Applicants respectfully request that the rejection of claims 2 and 3 under 35 U.S.C. § 112, first paragraph, be removed.

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Rejection Under 35 U.S.C. § 112, Second Paragraph

The objection to the specification and rejection of claims 2, 3, 9 and 11 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for reciting the term "Leu-OH" is respectfully traversed.

Applicants believe that claim 11 has been rejected in error because claim 11 does not recite the term "Leu-OH". Claims 2 and 3 have been cancelled herein. Therefore, only the rejection of claim 9 remains.

The Office Action states that the term "Leu-OH" is not clear regarding whether or not the hydroxyl group is linked to the alpha carbon of leucine. Applicants maintain that the term "Leu-OH" is clear and definite to one skilled in the art as a notation used to emphasize that the C-terminus of leucine is not modified. Nevertheless, in order to further prosecution, Applicants have amended claim 9 replacing the term "Leu-OH" with "Leu." Accordingly, Applicants respectfully request that the rejection of claims 2, 3, 9 and 11 under 35 U.S.C. § 112, second paragraph, be removed.

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Rejection Under 35 U.S.C. § 102(e) and 103(a)

The objection to the specification and rejection of claims 2 and 3 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, as obvious under 35 U.S.C. § 103(a) over Brunck, T.K. et al. (U.S. Patent No. 5,739,112) is respectfully traversed.

Applicants maintain that U.S. Patent No. 5,739,112 does not teach or suggest the claimed invention. In addition, since claims 2 and 3 have been cancelled herein, the rejection of claims 2 and 3 under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) has been rendered moot. Accordingly, Applicants respectfully request that the rejection of claims 2 and 3 under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a), be removed.

Rejection Under Obviousness Type Double Patenting

The rejection of claims 2, 3, 8-10, 21-23, and 25 under the doctrine of obviousness-type double patenting, as allegedly unpatentable over claims in U.S. Patent No. 5,849,510, respectfully is traversed.

Applicants maintain that the rejected claims are distinct and non-obvious over U.S. Patent No. 5,849,510. Nevertheless, in order to further prosecution of the

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subject application, Applicants submit herewith a terminal disclaimer disclaiming the terminal part of any patent granted on the subject application that would extend beyond the expiration date of U.S. Patent No. 5,849,510. In view of the terminal disclaimer submitted herewith, Applicants respectfully request that the Examiner remove the obviousness-type double patenting rejection of claims 2, 3, 8-10, 21-23, and 25 over claims in U.S. Patent No. 5,849,510.

Objection to Claim

The Office Action states that the disclosure is objected to because of the following informalities: claim 10 recitation "-Pal(3)Me" appears to be a misspelling. Claim 10, as well as claims 8, 11, 20, and Table 6 in the specification which recite the term "-Pal(3)Me" have been amended per the Examiner's suggestion to "-PalMe(3)."

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**CONCLUSION**

In light of the Amendments and Remarks herein, Applicants submit that the claims are now in condition for allowance and respectfully request a notice to this effect. The Examiner is invited to call the undersigned agent with any questions in regard to this application.

Respectfully submitted,

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### APPENDIX A

#### In the specification:

Please replace Table 6 which begins at page 96, line 10 and ends on page 101, line 2 with the following.

TABLE 6

1.  $\text{CF}_3\text{C}(\text{O})-(\text{iBu})\text{Phe}(\text{NH}_2)\text{-Chg-Arg-Leu-Pro-NH}_2$
2.  $\text{Ac-pAph-Chg-Arg-Pen}(\text{CH}_2\text{COOH})\text{-Pro-NH}_2$
3.  $\text{Ac-pAph-Ile-Arg-Leu-Pro-NH}_2$
4.  $\text{Ac-pAph-Chg-Dab}(\text{CH}=\text{N}(\text{CH}_3)_2)\text{-Leu-Pro-NH}_2$
5.  $\text{CF}_3\text{C}(\text{O})-(\text{iBu})\text{Nal}(2)\text{-Chg-Arg-Leu-Pro-NH}_2$
6.  $\text{Ac-Phe}(3\text{I},4\text{NH}_2)\text{-Chg-Arg-Leu-Pro-NH}_2$
7.  $\text{CF}_3\text{C}(\text{O})\text{-Tyr-Chg-Arg-Leu-Pro-NH}_2$
8.  $(5\text{-benzimidazolyl})\text{-Phe}(\text{NH}_2)\text{-Chg-Arg-Leu-Pro-NH}_2$
9.  $\text{CF}_3\text{C}(\text{O})-(\text{iBu})\text{Tyr-Ile-Arg-Leu-Pro-NH}_2$
10.  $\text{Ac}-(\text{Chx-CH}_2)\text{Tyr-Ile-Arg-Leu-Pro-NH}_2$
11.  $\text{D-Tyr-Chg-Arg-Leu-Pro-NH}_2$
12.  $\text{Ac-Trp-Chg-Arg-Leu-Pro-NH}_2$
13.  $(2\text{-benzofuroyl})\text{-Tyr-Chg-Arg-Pen-Pro-NH}_2$
14.  $(2\text{-benzofuroyl})\text{-pAph-Chg-[Pal(3)Me]PalMe(3)-Pen}(\text{CH}_2\text{COOH})\text{-Pro-NH}_2$
15.  $\text{Ac-pAph-Chg-Arg-Cys}(\text{CH}_2\text{COOH})\text{-Pro-NH}_2$
16.  $(\text{Alloc})\text{-pAph-Chg-Arg-Leu-Pro-NH}_2$
17.  $(2\text{-benzofuroyl})\text{-pAph-Chg-Arg-Pen}(\text{CH}_2\text{COOH})\text{-Pro-NH}_2$
18.  $\text{Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-Pen}(\text{CH}_2\text{COOH})\text{-Pro-NH}_2$

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19. Ac-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>
20. pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>
21. Ac-pAph-Chg-Arg-(HOOC-CH<sub>2</sub>)Gly-Pro-NH<sub>2</sub>
22. Ac-pAph-Chg-Arg(HOOC-CH<sub>2</sub>-CH<sub>2</sub>)Gly-Pro-NH<sub>2</sub>
23. Ac-pAph-Chg-Arg-Gla-Pro-NH<sub>2</sub>
24. Ac-pAph-Chg-Arg-Cys(CH<sub>2</sub>-COOH)-Pro-NH<sub>2</sub>
25. Ac-Pal(4)Me-Chg-Arg-Leu-Pro-NH<sub>2</sub>
26. Ac-(iBu)Nal(2)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
27. Ac-Phe(p-CONH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
28. Ac-pAph-Chg-Arg-N[1(1,3-dicarboxy)propyl]Gly-Pro-NH<sub>2</sub>
29. Ac-pAph-Chg-Dap(CH=N(CH<sub>3</sub>)<sub>2</sub>)-Leu-Pro-NH<sub>2</sub>
30. (2-quinolinoyl)-Phe(NH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
31. Ac-pAph-Chg-Arg-N(carboxymethyl)Gly-Pro-NH<sub>2</sub>
32. Ac-pAph-Chg-Arg-(carboxyethyl)Gly-Pro-NH<sub>2</sub>
33. Ac-mAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>
34. Alloc-pAph-Chg-[Pal(3)Me]PalMe(3)-Pen(CH<sub>2</sub>COOH)-Pro-NH<sub>2</sub>
35. Ac-pAph-Chg-Arg-N[1(1,3-dicarboxy)propyl]Gly-Pro-NH<sub>2</sub>
36. Ac-pAph-Ile-Arg-Leu-Pro-NH<sub>2</sub>
37. Ac-Phe(pNH<sub>2</sub>)-Chg-Arg-(Me)Leu-Pro-NH<sub>2</sub>
38. Ac-(Chx-CH<sub>2</sub>)Tyr-Chg-Arg-Leu-Pro-NH<sub>2</sub>
39. (3-pyridoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
40. (3-pyridoyl)-Nal(2)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
41. Ac-Pal(4)Me-Chg-Pal(4)Me-Leu-Pro-NH<sub>2</sub>
42. Alloc-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>
43. (4-isoquinolinoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
44. Ac-pAph-Cha-[Pal(3)Me]PalMe(3)-(Me)Leu-Pro-NH<sub>2</sub>



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45. Ac-pAph-Chg-[**Pal(3)Me**]PalMe(3)-Leu-Pro-NH<sub>2</sub>
46. (2-naphthyl-CH<sub>2</sub>)Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
47. (5-pyrazinoyl)Nal(2)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
48. (Benzoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
49. Ac-(2-methylpentanyl)-Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>
50. (2-pyridonyl)Phe(pNH<sub>2</sub>)Chg-Arg-Leu-Pro-NH<sub>2</sub>
51. (Benzoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
52. Ac-pAph-Chg-[**Pal(3)Me**]PalMe(3)-Leu-Pro-NH<sub>2</sub>
53. Ac-(2-methylpentyl)Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>
54. Ac-(iBu)Phe(pCN)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
55. Ac-(2-methylbutyl)Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>
56. Ac-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
57. Ac-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Hyp-NH<sub>2</sub>
58. Ac-Tyr-Chg-Arg-Leu-Pro-NH<sub>2</sub>
59. (2-naphthylsulfonyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
60. (2-methylbenzyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
61. (2-benzofuroyl)-Phe(pNH<sub>2</sub>)-Chg-Dab(CH=N(CH<sub>3</sub>)<sub>2</sub>)-Leu-Pro-NH<sub>2</sub>
62. Ac-(cyclopentenyl-CH<sub>2</sub>)Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>
63. Ac-Pal(4)Me-Chg-[**Pal(3)Me**]PalMe(3)-Leu-Pro-NH<sub>2</sub>
64. Ac-(iBu)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>
65. Ac-(Chx-CH<sub>2</sub>)-Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>
66. Ac-pAph-Chg-Arg-Leu-NH<sub>2</sub>
67. Ac-pAph-Chg-Arg-Leu-OH
68. (2-benzofuroyl)-pAph-Chg-[**Pal(3)Me**]PalMe(3)-NH<sub>2</sub>
69. Ac-(iBu)Phe(pNH<sub>2</sub>)-Chg-Arg-NH<sub>2</sub>
70. Alloc-pAph-Chg-[**Pal(3)Me**]PalMe(3)-NH<sub>2</sub>

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71. (2-quinolinoyl)-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>
72. Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH(1-methoxycarbonyl)-1-cyclohexyl
73. Ac-pAph-Chg-Arg
74. (2-pyridoyl)-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>
75. CF<sub>3</sub>C(O)-(iBu)Phe(pNH<sub>2</sub>)-Chg-Arg-NH<sub>2</sub>
76. Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(1-methoxycarbonyl)-1-cyclopentyl
77. Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(4-methoxycarbonyl  
-cyclohexyl)methyl
78. Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(3-thienyl-2  
-carboxylic acid methyl ester)
79. Ac-pAph-Chg-Arg-NH<sub>2</sub>
80. CF<sub>3</sub>C(O)-(iBu)Tyr-Chg-Arg-OH
81. Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(4-methoxycarbonyl  
-cyclohexyl)methyl
82. Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>
83. Ac-pAph-Pgl-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>
84. Ac-pAph-Chg-Pal(3)(CH<sub>2</sub>COOH)-NH<sub>2</sub>
85. (2-quin)-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>
86. Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(4-carboxycyclohexyl)methyl
87. Ac-pAph-Chg-NH[4-(1-methyl-pyridinium)methyl]
88. (2-furoyl)-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)
89. (3,4-dichlorobenzoyl)-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)
90. (2-thienylacetyl)-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)
91. (N-(5-methyl-2-thienoyl)-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)
92. Ac-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)
93. (Ethoxycarbonyl)-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)

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94. (2-fluorobenzoyl)-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)
95. Ac-pAph-Chg-NH-(4-amidinobenzyl)
96. Alloc-pAph-Chg-NH-[4-(-methylpyridinium)-methyl]
97. (t-Butoxycarbonyl)-pAph-Chg-NH-(4-trimethyl-ammonium benzyl)
98. (2-furoyl)-pAph-Chg-NH-1-[3(N-methylpyridyl)]-1-(methylacetate)ethyl
99. Ac-pAph-Chg-NH-1-[3(N-methylpyridyl)]-1-(methylacetate)ethyl
100. Ac-pAph-Chg-NH-[1-(1-methyl-4-pyridinium)ethyl]
101. Ac-pAph-Chg-NH-[1-(1-methyl-4-pyridinium)methyl]
102. Ac-pAph-Chg-NH-[1-(1-methyl-4-pyridinium)-2-hydroxy]ethyl
103. CF<sub>3</sub>C(O)-(iBu)-Tyr-Ile-Arg-NH<sub>2</sub>
104. Ac-D-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>
105. Ac-D-pAph-Chg-Arg-Gla-Pro-NH<sub>2</sub>
106. Ac-D-pAph-Chg-Arg-Cys(CH<sub>2</sub>-COOH)-Pro-NH<sub>2</sub>
107. Ac-D-pAph-Chg-Arg-N(carboxymethyl)Gly-Pro-NH<sub>2</sub>
108. Ac-D-pAph-Chg-Arg-(carboxyethyl)Gly-Pro-NH<sub>2</sub>
109. Ac-D-pAph-Chg-Arg-N[1(1,3-dicarboxy)propyl]Gly-Pro-NH<sub>2</sub>
110. Ac-D-pAph-Ile-Arg-Leu-Pro-NH<sub>2</sub>
111. Alloc-D-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>
112. Ac-D-pAph-Chg-[Pal(3)Me]PalMe(3)-Leu-Pro-NH<sub>2</sub>
113. Ac-D-pAph-Chg-Arg-NH<sub>2</sub>.

**In the claims:**

Please amend the claims as follows.

8. A compound selected from the group consisting of  
 (2-benzofuroyl)-Tyr-Chg-Arg-Pen-Pro-NH<sub>2</sub>;

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(2-benzofuroyl)-pAph-Chg-[Pal(3)Me]PalMe(3)-Pen(CH<sub>2</sub>COOH)-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg-Cys(CH<sub>2</sub>COOH)-Pro-NH<sub>2</sub>;  
(Alloc)-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
(2-benzofuroyl)-pAph-Chg-Arg-Pen(CH<sub>2</sub>COOH)-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-Pen(CH<sub>2</sub>COOH)-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>; Ac-pAph-Chg-Arg-(HOOC-CH<sub>2</sub>)Gly-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg(HOOC-CH<sub>2</sub>-CH<sub>2</sub>)Gly-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg-Gla-Pro-NH<sub>2</sub>; Ac-pAph-Chg-Arg-Cys(CH<sub>2</sub>-COOH)-Pro-NH<sub>2</sub>;  
Ac-Pal(4)Me-Chg-Arg-Leu-Pro-NH<sub>2</sub>; Ac-(iBu)Nal(2)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
Ac-Phe(p-CONH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg-N[1(1,3-dicarboxy)propyl]Gly-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Dap(CH=N(CH<sub>3</sub>)<sub>2</sub>)-Leu-Pro-NH<sub>2</sub>;  
(2-quinolinoyl)-Phe(NH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg-N(carboxymethyl)Gly-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg-(carboxyethyl)Gly-Pro-NH<sub>2</sub>; Ac-mAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
Alloc-pAph-Chg-[Pal(3)Me]PalMe(3)-Pen(CH<sub>2</sub>COOH)-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-Arg-N[1(1,3-dicarboxy)propyl]Gly-Pro-NH<sub>2</sub>;  
Ac-pAph-Ile-Arg-Leu-Pro-NH<sub>2</sub>; Ac-Phe(pNH<sub>2</sub>)-Chg-Arg-(Me)Leu-Pro-NH<sub>2</sub>;  
Ac-(Chx-CH<sub>2</sub>)Tyr-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
(3-pyridoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
(3-pyridoyl)-Nal(2)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
Ac-Pal(4)Me-Chg-Pal(4)Me-Leu-Pro-NH<sub>2</sub>; Alloc-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
(4-isoquinolinoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
Ac-pAph-Cha-[Pal(3)Me]PalMe(3)-(Me)Leu-Pro-NH<sub>2</sub>;  
Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-Leu-Pro-NH<sub>2</sub>;

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(2-naphthyl-CH<sub>2</sub>)Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 (5-pyrazinoyl)Nal(2)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 (Benzoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 Ac-(2-methylpentanyl)-Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>;  
 (2-pyridonyl)Phe(pNH<sub>2</sub>)Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 (Benzoyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 Ac-(2-methylpentyl)Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>;  
 Ac-(iBu)Phe(pCN)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 Ac-(2-methylbutyl)Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>;  
 Ac-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>; Ac-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Hyp-NH<sub>2</sub>;  
 Ac-Tyr-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 (2-naphthylsulfonyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 (2-methylbenzyl)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 (2-benzofuroyl)-Phe(pNH<sub>2</sub>)-Chg-Dab(CH=N(CH<sub>3</sub>)<sub>2</sub>)-Leu-Pro-NH<sub>2</sub>;  
 Ac-(cyclopentenyl-CH<sub>2</sub>)Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>;  
 Ac-Pal(4)Me-Chg-[Pal(3)Me]PalMe(3)-Leu-Pro-NH<sub>2</sub>;  
 Ac-(iBu)-Phe(pNH<sub>2</sub>)-Chg-Arg-Leu-Pro-NH<sub>2</sub>; and  
 Ac-(Chx-CH<sub>2</sub>)-Tyr-Ile-Arg-Leu-Pro-NH<sub>2</sub>.

9. A compound selected from the group consisting of  
 Ac-pAph-Chg-Arg-Leu-NH<sub>2</sub> and Ac-pAph-Chg-Arg-[Leu-OH]Leu.

10. A compound selected from the group consisting of  
 (2-benzofuroyl)-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub> and Ac-(iBu)Phe(p NH<sub>2</sub>)-Chg-Arg-NH<sub>2</sub>.

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11. A compound selected from the group consisting of  
 Alloc-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>;  
 (2-quinolinoyl)-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>;  
 Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH(1-methoxycarbonyl)-1-cyclohexyl;  
 Ac-pAph-Chg-Arg-NH<sub>2</sub>; (2-pyridoyl)-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>;  
 CF<sub>3</sub>C(O)-(iBu)Phe(pNH<sub>2</sub>)-Chg-Arg-NH<sub>2</sub>;  
 Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(1-methoxycarbonyl)-1-cyclopentyl;  
 Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(4-methoxycarbonyl-cyclohexyl)methyl;  
 Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(3-thienyl-2-carboxylic acid methyl ester);  
 Ac-pAph-Chg-Arg-NH<sub>2</sub>; CF<sub>3</sub>C(O)-(iBu)Tyr-Chg-Arg-OH;  
 Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(4-methoxycarbonyl-cyclohexyl)methyl;  
 Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>; Ac-pAph-Chg-Pal(3)(CH<sub>2</sub>COOH)-NH<sub>2</sub>;  
 (2-quinolinecarboxy)-pAph-Chg-[Pal(3)Me]PalMe(3)-NH<sub>2</sub>;  
 Ac-pAph-Chg-[Pal(3)Me]PalMe(3)-NH-(4-carboxycyclohexyl) methyl; and  
 CF<sub>3</sub>C(O)(iBu)-Tyr-Ile-Arg-NH<sub>2</sub>.
20. A compound selected from the group consisting of  
 Ac-D-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>; Ac-D-pAph-Chg-Arg-Gla-Pro-NH<sub>2</sub>;  
 Ac-D-pAph-Chg-Arg-Cys(CH<sub>2</sub>-COOH)-Pro-NH<sub>2</sub>;  
 Ac-D-pAph-Chg-Arg-N(carboxymethyl)Gly-Pro-NH<sub>2</sub>;  
 Ac-D-pAph-Chg-Arg-(carboxyethyl)Gly-Pro-NH<sub>2</sub>;  
 Ac-D-pAph-Chg-Arg-N[1(1,3-dicarboxy)propyl]Gly-Pro-NH<sub>2</sub>;  
 Ac-D-pAph-Ile-Arg-Leu Pro-NH<sub>2</sub>;  
 Alloc-D-pAph-Chg-Arg-Leu-Pro-NH<sub>2</sub>;  
 Ac-D-pAph-Chg-[Pal(3)Me]PalMe(3)-Leu-Pro-NH<sub>2</sub>; and  
 Ac-D-pAph-Chg-Arg-NH<sub>2</sub>.

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25. A method of specifically inhibiting the activity of Factor Xa, comprising contacting the factor Xa with the compound as in [of] claims [2] 7, 8, 9, 10, 11, 20, 21, 22, or 23.

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